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THE INSECT PEST SURVEY BULLETIN

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BUREAU OF ENTOMOLOGY
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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR MAY, 1926

During the coming month careful observations should be made by all Survey Collaborators working in the regions where Brood XVII of the periodical cicada is due to appear this year. This is one of the problematical broods with but few well developed colonies ever reported. It has been reported from Virginia, Georgia, Iowa, and Missouri in past years.

Brood "A" of white grub adults is due to occur in the east-central States. Rather heavy flights have already been recorded from southern Illinois and parts of Indiana. Reports of unusual abundance of the beetles have also been received from Iowa, Missouri, Kansas, and Mississippi.

Cutworms still continue to be important factors in the insect damage of this spring, a very unusual outbreak of the variegated cutworm having been reported from Mississippi and Texas.

Indications point to a rather serious Hessian fly infestation of wheat in Kansas.

Chinch bugs seem to be unusually abundant in central and south-central Illinois, and in parts of Kansas. The outbreak in Mississippi reported last year does not seem to be abating. Reports of unusual abundance have already been received from Tate and Marshall Counties in the State.

Telegraphic communication dated June 4 informs us that the fall armyworm is appearing in enormous numbers and defoliating corn, cane, sorghum, alfalfa, etc., in southern Louisiana.

Aphids attacking deciduous fruits still continue to be unusually scarce in the New England and Middle Atlantic States, extending westward to Missouri. South of North Carolina aphids seem to be normally abundant.

The tent caterpillar is being reported as unusually abundant from the Connecticut River Valley westward into New York State, and southward to Virginia.

The corn ear worm has practically destroyed the peach crop on a 4,000-tree plantation in Georgia owing to a failure to turn under a hairy vetch crop early in the season.

One of the most serious insect outbreaks on pecan that has come to the attention of the State Entomologist of Mississippi is the outbreak of the cambium curculio, Conotrachelus anaglypticus Say, reported from the Pearl River section of that State.

The citrus aphid situation in Florida is reported as very favorable, very slight infestations having been observed. Rather serious infestations by this pest, however, are reported from parts of Louisiana.

Boll weevil emergence continues to be slow at practically all the cooperating stations up to May 15.

OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA, FOR MAY, 1926

Grasshoppers were hatching in all sections of southern British Columbia at the end of April and, by the middle of May, were noticed abundantly in many parts of the province. Poisoned bait mixing stations are in operation from the Peace river district to the international boundary.

The cricket, Anabrus longipes Caudell, is causing important damage at Vernon, British Columbia.

The western army cutworm has appeared in outbreak form over a large section of southern Alberta. Depredations by this species and the early cutworm, Euxoa tristicula Morr., have been reported from many parts of Saskatchewan. Cutworms are proving very troublesome in the Vernon district, British Columbia.

A serious outbreak of the red-backed cutworm, Euxoa ochrogaster Gn., is believed to be developing in some sections of southern Manitoba.

The bronzed apple tree weevil, Magdalis aeneascens Lec., which breeds in dead and dying trees is causing foliage injury in orchards, in some sections of the Okanagan valley, British Columbia.

The oblique-banded leaf-roller is an insect of major importance in the orchards of the Okanagan Valley, B. C., this season. The tarnished plant bug has caused marked injury to apple buds in sections of the valley.

The strawberry root weevil, is more numerous in the Victoria district, British Columbia, than for many years, and will probably cause considerable damage.

The sawfly, Allantus mellipes Norton has been found in greenhouses at Moncton, New Brunswick, on roses recently imported from the United States.

Few reports of insect activity have been received from Eastern Canada where the spring weather has been cold and backward.

GENERAL FEEDERS

WHITE GRUBS (Phyllophaga spp.)

- Massachusetts A. I. Bourne (May 21): The first May beetles were collected the night of May 16 and 17, although to date very few of the beetles have been found.
- Indiana H. F. Dietz (May 18): May beetles have been very abundant at lights at night since May 5.
- J. J. Davis (May 25): Have been abundant the past month. An unusual abundance was reported from Argos on May 17. Reports continue to be received calling attention to the abundance of white grubs in northern Indiana last season.
- Illinois W. P. Flint (May 18): The present season is one in which the major flight of adults of Brood A would be expected. Rather heavy flights of May beetles have been noted in southern Illinois by S. C. Chandler, and in western Illinois by J. H. Bigger. In the eastern and northern parts of the State moderately heavy flights of May beetles occurred.
- Iowa C. N. Ainslie (May 18): The emergence of adults at Sioux City has been retarded by cool, dry weather but they are now appearing in large numbers at lights, Lachnosterna implicata Horn and Lachnosterna rugosa Melsh. are common
- Missouri L. Haseman (May 20): Since about May 10, two species of June Beetles (?) have been on wing in great numbers collecting about shade trees and coming to lights.
- A. C. Burrill (May 22): Field corn is not up but local gardens suffer from above pests in many places in Jefferson City. I suppose that late season and weak corn, only a few inches high, has intensified the gardeners' troubles.
- Kansas J. W. McColloch (April 5): White grubs have caused serious damage to nursery stock grown at Bartlett. (May 7): Adults of this species were received from Salina with the information that they were defoliating elms.
- Mississippi R. W. Harned (May 13): Although May beetles are apparently not so abundant this year as during several previous years, complaints have been received in regard to their damage to pecan trees. From Scooba, Miss., on May 10, a correspondent wrote that most of the leaves and twigs from his young pecan trees had been eaten by May beetles. He reported them so numerous that they sounded like swarms of honeybees on his trees at night. The specimens that he sent proved to be Phyllophaga hirticula and Phyllophaga praetermissa. Phyllophaga micans is the species that has been collected most abundantly this spring, especially from the southern part of the State. Up to May 8, 5,848 May

beetles have been received, and identified by J. M. Langston as follows:

<u>Phyllophaga micans</u> Knoch	3121	<u>Phyllophaga vehemens</u> Horn	39
<u>Phyllophaga praetermissa</u> Horn	1070	<u>P. fraterna</u> Burm. var. <u>mississippiensis</u> Davis	35
<u>Phyllophaga arkansana</u> Schffr.	436	<u>Phyllophaga perlonga</u> Davis	34
<u>Phyllophaga calceata</u> Lec.	216	<u>Phyllophaga forsteri</u> Burm.	34
<u>Phyllophaga hirticula</u> Knoch	214	<u>Phyllophaga knochi</u> Gyll	27
<u>P. micans</u> var. <u>cupuliformis</u> Langston	198	<u>Phyllophaga profunda</u> Blanch.	17
<u>Phyllophaga crenulata</u> Froel.	84	<u>Phyllophaga fervida</u> Fab.	12
<u>Phyllophaga prunina</u> Lec.	72	<u>Phyllophaga fraterna</u> Burm.	7
<u>Phyllophaga ulkei</u> Sm.	65	<u>Phyllophaga ilicis</u> Knoch	2
<u>Phyllophaga tristis</u> Fab.	50	<u>Phyllophaga diffinis</u> Blanch.	2
<u>Phyllophaga bipartita</u> Horn	48	<u>Phyllophaga delata</u> Horn	
<u>Phyllophaga luctuosa</u> Horn	61		

Phyllophaga anxia Lec..... 1

Phyllophaga forbesi Glasgow .1

W. L. Gray, Inspector for the State Plant Board at Natchez, Miss., reports that many pecan trees on properties in Adams and Wilkinson counties in the southwestern corner of Mississippi have been practically defoliated by May beetles. No beetles were collected, so we can not be certain what species has caused this damage.

On May 19, Inspector J. P. Kislanko, Ocean Springs, Miss., wrote: "It might be of interest to you to know the damage that May beetles have caused in some sections of this territory. Yesterday we visited A. W. King, 7 miles north of Ocean Springs, to inspect his nursery. I was very much astounded. Every pecan tree on his place was completely defoliated by May beetles, apparently by Phyllophaga micans, and Phyllophaga micans var. cupuliformis. The orchard appears as though it was dormant. The pecan nursery stock was also ruined. New leaves are being formed since the beetles have commenced to disappear. Mr. King states: 'There is one now to every 10 a week ago.' He also states that each night he had a fire built in his yard and the beetles would come in multiple millions. I should have mentioned that the pecan trees in Ocean Springs suffered no noticeable injury from May beetles, but 4 miles north of Ocean Springs the work of the beetles is serious and becomes more so farther north. I do not know how far north this severe damage extends. Damage to pecan trees by May beetles has also been reported from other sections of the State, especially from one property at Jackson in Hinds County."

CUTWORMS (Noctuidae)

Indiana J. J. Davis (May 25): Cutworms damaged a six acre field of onions at Angola on May 12, and pansies at Richmond on May 18. Reported as abundant in sod fields being planted to corn from several sections of central and northern Indiana. (May 26): Reported today damaging corn at Delphi.

Iowa C. N. Ainslie (May 18): There is much complaint of damage by cutworms; all sorts of garden plants, potatoes, and strawberries are being injured. These larvae are still small and immature.

New Mexico

J. R. Douglass (May 21): Complaints have been received from farmers throughout the Estancia Valley concerning the great number of cutworms present. No commercially important damage has been noted, as corn is just coming up and beans are being planted at the present time. Eighty thousand acres of cultivated land lay idle last season on account of the drought.

BLACK CUTWORM (Agrotis ypsilon Rott.)

Mississippi

R. W. Harned (May 13): Cutworms found damaging sweet peppers at Pascagoula, Miss., by R. P. Colmer on May 3, have been identified by S. E. Crumb of the Bureau of Entomology as the greasy cutworm, (Agrotis ypsilon).

ARMY CUTWORM (Chorizagrotis auxiliaris Grote)

Kansas

J. W. McColloch (May 20): During the past month injury to wheat has been reported from Smith, Rice, and Ellis Counties; to alfalfa in Wabaunsee, Saline, and Dickinson Counties; and to gardens in Dickinson and Rooks Counties.

Nebraska

M. H. Swenk (April 25-May 25): The army cutworm has been reported from Perkins, Sheridan and Knox Counties. In Sheridan County these cutworms infested alfalfa to such an extent that some fields were plowed up and planted to other crops. In Lincoln, during the warm nights of May 23 and 24, there were literally thousands of the adults of Chorizagrotis auxiliaris flying during the evenings. They were especially noticeable on flowers of peony and iris, and caused much annoyance by getting in between the windows and screens of houses.

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli Guen.)?

California

E. A. McGregor (May 18): During the first two weeks of May there has been a very conspicuous occurrence of the yellow-striped armyworm, Prodenia praefica Grote. At first the caterpillars confined their attacks to certain common native weeds, and at the height of occurrence in the open fields there was nearly one larva per square foot of ground. As native plants dried up following the end of the rainy season, the armyworms began to migrate. It was of much interest to note that the great bulk of the individuals pursued a common direction, namely, from the southeast to the northwest. This seems remarkable for an immature stage.

One young orange grove which lay to the northwest of a large pasture soon became rather badly defoliated by the work of the migrating worms. The owner combatted the pest by placing arsenic-treated oranges at the base of each young tree. After 24 hours there was an average of about 30 dead armyworms near the foot of each tree. The treatment seemed to give protection until the worst of the migration was over.

The migration extended over a rather large extent of the country.

VARIEGATED CUTWORM (Lycophotia margaritosa saucia Hb.)

Mississippi

R. W. Harned (May 27): This species is doing serious damage in the Delta or western section of Mississippi. On May 20, T. Y. Williford, County Agent, Cleveland, Bolivar County, Miss., mailed to us several dozen specimens of the Variegated cutworm. At the same time he wrote: "Big collection of worms taken from alfalfa field where they had denuded stems of all leaves, moved across into gardens and cotton fields, ate up Irish potatoes, cabbage, tomatoes, onion plants, cotton, and everything in their way. Do their work mostly at night, hiding in the day in cracks of ground or under piles of alfalfa or in shady places. Dug up some of them from 4 inches under ground, showing change to lighter color or losing some of dark color. The red looking pupae were found at same place about same distance under soil. We thought possibly they were pupae of the worms. The worms have not bothered sweet clover."

On May 19 Inspector D. W. Grimes, Leland, Miss., sent in a supply of these cutworms stating that they were causing severe damage in places. The specimens that he sent were collected in alfalfa field. For positive determination a number of the insects from Mr. Williford were sent to S. E. Crumb of the U. S. Bureau of Entomology, who identified them as this species.

On May 26 a correspondent at Clarksdale in Coahoma County sent a supply of the variegated cutworms to us with a report that they are feeding on alfalfa and upon leaving the alfalfa field are eating cotton clean as they go. This makes three counties from which these insects have been reported as serious during the past week. These counties, Washington, Bolivar, and Coahoma, are in a row along the Mississippi River in the western part of the State. They are in the center of the Delta, the richest section of the State.

Texas

F. L. Thomas (May 12): Originating in alfalfa and spreading into young cotton near Ennis in Ellis County, absolutely cleaning 7 acres of cotton, and causing much damage to the alfalfa.

WIREWORMS (Elateridae)

Indiana

J. J. Davis (May 25): Reported abundant in sod and other fields but no damage yet this season excepting in one instance at Brookville, May 15, where they were heavily infesting sprouting potatoes. An 8-acre field of onions reported as practically destroyed by wireworms in Steuben County.

Missouri

L. Haseman (May 21): Farmers are reporting stands of corn on 50 and 75 acre plantings destroyed. The pest is proving a real problem on many farms, and is widely distributed in this State.

A. C. Burrill (May 22): Field corn is not up but local gardens suffer from this pest in many places in Jefferson City. I suppose

that late season and weak corn, only a few inches high, have intensified the gardeners' troubles.

Kansas J. W. McColloch (May 14): Germinating seed corn has been seriously injured by wireworms at Fort Scott, Abilene, White City, and Ogden. In many fields it has been necessary to replant.

CEREAL AND FORAGE-CROP INSECTS

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

Indiana J. J. Davis (May 25): Hessian flies were out laying eggs on May 3 at La Fayette.

Missouri L. Haseman (May 21): In central Missouri it is practically impossible to find this insect.

Kansas Kansas Crop Report of the State Board of Agriculture (April 10): Attention is called to the fact that the autumn infestation of the Hessian fly was much greater after seeding last fall than it was in the fall preceding the 1924 harvest. The potential menace from this source is therefore greater now than it was two years ago. In some south-central counties field examination on acreages containing much volunteer or in early seeded fields shows as many as 10 or 12 flies in the flaxseed stage this spring. Weather conditions during the egg-laying time and during the hatch of the first brood will have much to do with the amount of this year's fly damage.

CHINCH BUG (Blissus leucopterus Say)

Illinois W. P. Flint (May 18): Examinations in small grain indicate that chinch bugs will cause damage in local areas in some 50 counties in the central and south-central parts of Illinois. Egg laying is just starting, but no young bugs have been observed in the field to date. The weather thus far has been rather dry and favorable to the development of the chinch bugs.

Missouri L. Haseman (May 21): No reports of chinch bugs in wheat have been received to date.

Kansas J. W. McColloch (April 13): I also have the report of the county agent of Washington County relative to the chinch-bug situation, in which he states that all bunch grass which was not burned over last fall contains a large number of chinch bugs, and there is danger of considerable injury this year.

Mississippi R. W. Harned (May 12): On May 12 chinch bugs were collected on corn at Coldwater, Tate County, by Inspector T. F. McGehee. These insects are reported as becoming very abundant on corn in portions of Tate, DeSoto, and Marshall Counties.

Complaints in regard to chinch bugs were not unexpected because

the summers of 1924 and 1925 have been exceptionally dry throughout the northern part of Mississippi. Many complaints in regard to chinch bugs were received during the summer of 1924 and a still larger number were received during 1925. (May 22): A complaint has been received in regard to chinch bugs damaging corn in Sunflower County, Miss.; recently. A previous report in regard to these insects damaging corn and sugarcane in the northern part of the State was submitted several days ago.

CORN

SEED-CORN BEETLE (Agonoderus pallipes Fab.)

Missouri

A. C. Burrill (May 22): At Jefferson City heavy emergence of adults at street and house lights the first half of May was reported. Always very abundant in the Missouri and Mississippi Valleys within this State.

CORN ROOT WEBWORM (Crambus caliginosellus Clem.)

West Virginia

W. E. Rumsey (May 24): We have a report from Heater, Braxton County, that the corn root webworm is quite a serious pest in that locality.

GARDEN WEBWORM (Loxostege similalis Guen.)

Texas

F. L. Thomas (May 17): On corn at Fort Bend County on May 14.

CORN EAR WORM (Heliothis obsoleta Fab.)

Alabama &
Georgia

Oliver I. Snapp (May 20): A number of reports have been received from Georgia and Alabama in reference to much damage to vetch this year from the corn ear worm.

ARMYWORM (Cirphis unipuncta Haw.)

South Carolina

J. O. Pepper (May 12): Specimens of the true armyworm have been received from Beaufort County and reported as feeding on small grains.

Indiana

H. F. Dietz (May 18): Armyworm moths were first taken at lights at Indianapolis on May 2.

J. J. Davis (May 25): Armyworm moths have been unusually abundant. They were reported common at lights and at peach blossoms the latter part of April in southern Indiana. Reports of their abundance on apricot flowers on May 2 at Greentown in central Indiana were also received and they were observed common at lights at La Fayette about the same time. No report of armyworms yet received.

LEATHER-JACKET LARVAE (Tipulidae)

Indiana

J. J. Davis (May 25): Reported abundant and injuring corn at Rushville, May 19.

ALFALFA

ALFALFA WEEVIL (Phytonomus posticus Gyll.)

Wyoming

C. L. Corkins (May 8): Weevils are abundant only in a few fields. Egg laying has started. One small larva was taken. At Careyhurst the average number of eggs per 100 fresh stems on May 5 was 13.3; the number of adult weevils per 100 strokes of the net was 3.7.

AN ANOMALA (Anomala binotata Gyll.)

Kansas

J. W. McColloch (May 7): Adults were received from Holton with the information that they were very abundant in alfalfa.

PEA APHID (Pisum nigrum Kalt.)

Kansas

J. W. McColloch (May 20): There has been a rather general outbreak of the pea aphid in the alfalfa fields of the State. The cold backward spring has been favorable for the development of the aphids. The outbreak has been of interest because of its spread westward in the State. The heaviest loss was probably in the southwestern part of the State.

FALL ARMYWORM (Laphygma frugiperda S. & A.)

Florida

J. R. Watson (May 15): A good many reports are reaching the office concerning the depredations of the fall armyworm, mostly on grass.

CLOVER LEAF WEEVIL (Hypera punctata Fab.)

Illinois

W. F. Flint (May 18): The clover leaf weevil, which earlier in the season threatened to be quite destructive in the western sections of Illinois, has caused very little damage, the insects having been largely destroyed by the fungus disease which frequently attacks the larvae.

Kansas

J. W. McColloch (May 20): Larvae and cocoons of the clover leaf weevil have been received from a number of localities in the State, southeastern quarter, during the past month. In no case has serious injury been reported.

Indiana

J. J. Davis (May 25): The clover leaf weevil is not so generally abundant as usual. Reports of injury to little red clover and to sweet clover were received from the southern sections of the State. (May 26): Two reports of heavy infestations for north-central Indiana were received today.

Nebraska

Don B. Whelan (May 25): Larvae of the clover leaf weevil were brought in from an alfalfa field in Lancaster County on April 27 where they were causing injury.

FRUIT INSECTS

APPLE

APHIDIDAE

Massachusetts

A. J. Bourne (May 21): There is a very marked scarcity in the number of apple aphids which are to be found in the orchards throughout the State.

New York

E. P. Felt (May 26): Apple-tree aphids are remarkable for their scarcity, in the vicinity of Albany.

Indiana

E. F. Dietz (May 18): Plant lice of all species occurring on apple have been noticeable by their absence. Inspections have been made around Indianapolis, Martinsville, Bluffton, and Fair Oaks at various times from the middle of April to the present.

J. J. Davis (May 25): Apple aphids are very scarce throughout the State.

Missouri

L. Haseman (May 21): Up to the present date no plant lice injury has shown up on apple trees in central Missouri. No winter eggs appeared last fall and winter and no lice have as yet reached the apples.

ROSY APPLE APHID (Anuraphis roseus Baker)

Pennsylvania

G. F. MacLeod (April 21): This aphid occurs generally in younger plantings and is abundant enough in Berks County to make control practices necessary.

H. B. Hodgkiss (April 30): This species is not present in large numbers over the entire area but occurs especially in old orchards. In the majority of these it has been necessary to make a special point to effect control although in a few of them the infestation is comparatively small. Reported from Snyder, Juniata, Union, Northumberland, and Dauphin Counties.

South Carolina

J. O. Pepper (May 10): This insect recently appeared in large numbers and has caused the leaves of apple to curl. However, the natural enemies are holding it under control at present.

WOOLLY APPLE APHID (Eriosoma lanigerum Hausm.)

South Carolina

J. O. Pepper (May 15): The woolly apple aphid is abundant in the college orchard this year.

Ohio

E. W. Mendenhall (May 5): I find the appearance of woolly apple

aphids on the English and American elms in the parks in Dayton, Ohio. They seem to be crawling on the bodies of the trees.

BROWN SOFT SCALE (Lecanium coryli L.)

Washington Arthur Frank (May 1): Infestation by Lecanium coryli is present in Whatcom County and also King County and about the City of Seattle. This insect has escaped from British Columbia into this country, as they had a very severe outbreak in 1924-25. At present the infestations occur upon apples, pears, prunes, cherries, gooseberries, currants, raspberries and plums. The pest has escaped into the native vegetation at several places and I have reports of its presence upon the native timber.

CODLING MOTH (Carpocapsa pomonella L.)

Massachusetts A. I. Bourne (May 21): The codling moth was reported to have begun pupation early in May. Mr. Whitcomb in Middlesex County observed the first pupation on May 2. Here at Amherst the first pupation was noted four or five days later.

Indiana J. J. Davis (May 25): The codling moth situation is unchanged. Where proper spray methods are practised no trouble is evident. Examination in an orchard at Mitchell showed that about a third or fourth of the overwintering larvae had pupated. Emergence records indicate that the regular spraying schedule for the first brood of codling moth worms is applicable this year.

Illinois W.P. Flint (May 18): Emergence of codling moth adults was first observed in southern Illinois on May 8, and adults are now appearing in both central and southern sections of the State. Apparently the young worms will start entering the apples about two weeks later this season than was the case in 1925.

Missouri L. Haseman (May 21): The pest was slow emerging as the moth, though in central Missouri moths have been emerging since May 13 in breeding cages. Moths were on wing in the orchard on May 20.

EYE-SPOTTED BUDMOTH (Spilonota ocellana Shiff.)

Massachusetts A. I. Bourne (May 21): Apple bud moths are about normal in regard to their abundance as compared with the past few seasons.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

Massachusetts A. I. Bourne (May 21): The apple tent caterpillars, which were hatching out just about the time of my last report, have fully justified our early predictions as to their relative abundance. Reports which have come in from the eastern part of the State invariably found this insect to be considerably less abundant than for several years past. Here in the western half of the State, however, the pest is rather on the increase.

is sufficient to cause serious injury by the second generation unless proper control measures are taken against the first-generation nymphs.

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

Ohio

E. W. Mendenhall (May 4): The oyster-shell scale infests a variety of trees and I find it quite bad on some of the honey-locust in Springfield; this year. The poplar are very badly infested in Ohio.

Indiana

H. F. Dietz (May 18): The oyster-shell scale, light brown form of Glenn, began hatching at Indianapolis on May 15.

J. J. Davis (May 25): The oyster-shell scale appears to be as numerous as a year ago. No hatching has occurred at La Fayette up to date.

SCURFY SCALE (Chionaspis furfura Fitch)

Indiana

J. J. Davis (May 25): The scurfy scale appears to be as numerous as a year ago. No hatching has occurred at La Fayette up to date.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Massachusetts

A. I. Bourn (May 21): The European red mite was observed to be hatching on May 6 and 7, here at Amherst. Mr. Whitcomb, who is located in the eastern part of the State, reports finding them hatching some days earlier than this, and that by May 7 close to 50 per cent of the eggs had hatched, indicating that in the particular region of Middlesex County the overwintering eggs hatched three or four days earlier than this date. On the whole it appears that there is a slight increase in the abundance of this pest this present season as judged by reports which we have received thus far.

Connecticut

M. P. Zappe (May 18): Mites are very plentiful in New Haven and Fairfield Counties on unsprayed trees and also on some sprayed trees that had not been very thoroughly sprayed with miscible oil at the delayed dormant period.

New York

C. R. Crosby and assistants: Infestations in Ulster County, while general, do not appear to be severe.

PEAR

PEAR THRIPS (Taeniothrips inconsequens Uzel)

New York

C. R. Crosby and assistants: In Orange County, on April 17, only a few specimens were found, whereas in Columbia County, on April 23, thrips appeared in numbers on pears, in fact on all species of fruit trees. In Ulster County a few individuals were found on April 20. Their numbers increased slightly on April 21. The buds were sufficiently open to allow the insects

to enter easily. This fact made it difficult to time a spray for their control. In Greene County, on April 23, a few individuals were found on the pear buds in all parts of the county. In Dutchess County, on April 23, these insects were observed in small numbers. In Orange County they emerged in some numbers on April 21 and 22. As high as 30 individuals per bud were observed. It appears that no effective spray can be applied to control the adults this season.

PEAR PSYLLA (Psylla pyri L.)

Massachusetts A. I. Bourne (May 21): The pear psylla has been found to be about as abundant as for the last few years, but we are finding that oviposition seems to be extending over a longer period and that both the adults and newly laid eggs can be found much later in the season than is normally the case. This somewhat complicates control measures since the lime-sulphur treatment applied at the time of the "pink" on the pears has not given as good control as normally is the case, owing to the fact that so many of the psyllas have continued laying after the time at which this spray could be applied safely.

New York C. R. Crosby and assistants: The pear psylla is commonly found in orchards in Dutchess County at this time but oviposition did not start until April 13. In Ulster County small numbers of eggs have been laid in most orchards and large numbers have been found near the Hudson River on April 18. In Orange County on April 17 oviposition was heavy.

PEACH

PEACH BORER (Aegoria exitiosa Say)

Indiana J. J. Davis (May 25): Reports indicate that the weather conditions following paradichlorobenzene treatments for the peach borer were unfavorable and that a less effective control than normal was obtained.

IMBRICATED SNOOT BEETLE (Boicocerus imbricatus Say)

Indiana J. J. Davis (May 25): Last week, about May 18, the imbricated snout beetle was reported by Mr. Burkholder of the Purdue Horticultural Department doing considerable damage to a young peach orchard at Booneville, the beetles destroying the unfolding leaves.

PLUM CURCULIO (Conotrachelus nemophar Hbst.)

Massachusetts A. I. Bourne (May 21): A few plum curculios were collected from apple trees by the middle of the month, indicating that they had left winter quarters and gone into the orchards somewhat earlier than has been the case for the last two seasons.

North Carolina R. W. Leiby and assistants (May 10): Larvae of the first generation

now developing in peaches. This pest is apparently not so numerous as last year.

Georgia Oliver I. Snapp (May 20): The curculio infestation in the Georgia Peach Belt is now lighter than it has been at any time during the last eight years at Fort Valley. The infestation has gradually become lighter since the curculio suppression campaign was started in 1921. Prospects now point to a Georgia peach crop of unusually fine quality this year.

Missouri L. Haseman (May 21): This pest is beginning its work but it seems less abundant than usual in the orchards of central Missouri. Cherries are showing some stings but peaches seem free as yet.

ORIENTAL PEACH MOTH (Laspeyresia molesta Busck)

North Carolina R. W. Leiby and assistants (May 12): The first generation of adults began emergence today, reared from larvae collected in the field.

Georgia Haliard De La Parelle (May 7): The Oriental peach moth has not appeared in any appreciable numbers in the State of Georgia this year. I have recently made a survey of the orchard at Macon which we used for experimental purposes last season, and did not find any of these insects. The same gratifying report comes from Mr. Oliver I. Snapp that the insect has not appeared in the Fort Valley district. We have had no reports of injury from any other section of the State.

Oliver I. Snapp (May 20): Adults of the first generation are now emerging. Both twig and green peach injury have been found in the field at Fort Valley and Macon. The infestation is very light.

CORN EAR WORM (Heliothis obsoleta Fab.)

Georgia Oliver I. Snapp (May 18): The corn ear worm had practically destroyed the crop of peaches on 4,000 young peach trees at Plains. The grower had expected to harvest 1,500 crates from these trees. Hairy vetch had been planted in this orchard, and the grower failed to turn it under early enough. As the vetch became old the worms crawled up the trees and devoured the green peaches. Their progress into other near-by peach orchards and cornfields was halted only after deep furrows containing post-hole traps had been made.

BLACK PEACH APHID (Anuraphis persicae-niger Smith)

Mississippi R. W. Harned (May 13): A second complaint in regard to the black peach aphid in this State has been received from Scooba. A correspondent mailed them on May 3, and reported that they were taken from young trees purchased in February from a nursery in North Carolina.

PEACH TWIG BORER (Anarsia lineatella Zell.)

- Massachusetts A. I. Bourne (May 21): Mr. Whitcomb reports discovering the peach twig borer, Anarsia lineatella Zell., boring in the buds of peach on May 14, at which time larvae were apparently about two-thirds grown. His estimate of the injury they were causing ranged from 2 to 5 per cent.
- South Carolina J. O. Pepper (May 1): The work of this insect has been observed in a number of orchards in the Piedmont Section but is not considered as causing serious injury.

PEACH BORER (Aegeria exitiosa Say)

- Missouri L. Haseman (May 21): This pest has been scarce for two or three years in central Missouri and a few are to be found in untreated trees this spring.

COTTONY PEACH SCALE (Pulvinaria amygdali Ckll.)

- New York C. R. Crosby and assistants: A number of peach growers in Niagara, Monroe, Orleans, and Wayne Counties, bordering Lake Ontario, are applying lubricating-oil emulsions and miscible-oil sprays for the control of this pest. Infestations are spotted from the several counties and in the orchard. A good percentage of the overwintering forms were killed during the winter.

CHERRY

CHERRY SCALE (Aspidiotus forbesi Johns.)

- Ohio E. W. Mendenhall (May 19): I find that most of the cherry trees in central and southwestern Ohio are infested quite badly with the cherry scale.

PLUM

RUSTY PLUM APHID (Hysteroneura setariae Thos.)

- Georgia & Alabama Oliver I. Snapp (April 27): I have received a number of specimens and complaints of this pest from Georgia and Alabama. In most cases they are attacking plum trees, but a few reports show damage to young peach trees. The spring has been unusually cool, with frequent light rains, and aphids of all kinds are more abundant than usual.
- Mississippi R. W. Earned (April 24): Reported by a correspondent attacking cherry at McCool on April 20, on plum at Newton on April 24, and was determined by A. L. Hamner as this insect.

SPRING CANKERWORM (Paleacrita vernata Peck)

- Kansas J. W. McColloch (May 6): Eggs and larvae were received from

Osawatomie with the report that they were very abundant on plums.

EUROPEAN FRUIT LECANIUM (Locanium corni Bouche')

New York C. R. Crosby and assistants (April 10): This species appears to be prevalent on plum and prune, and in at least two orchards in Wayne County the infestation is serious.

GRAPE

EIGHT-SPOTTED FORESTER (Alypia octomaculata Fab.)

Indiana H. F. Dietz (May 13): Moths of the eight-spotted forester were first observed by F. N. Wallace on May 16.

SNOWY TREE CRICKET (Oecanthus niveus DeG.)

New York C. R. Crosby and assistants: In several cases injury was caused by tree crickets in Erie County and oviposition observed.

GRAPEVINE HOPLIA (Hoplia callipyge Lec.)

California E. E. Welly (April 20): This insect is reported attacking grapes and is doing considerable damage in the vicinity of Merced.

CURRENT

TARNISHED PLANT BUG (Dysus pratensis L.)

Indiana J. J. Davis (May 24): Tarnished plant bugs were reported very abundant on current bushes at Walkerton on May 7, and were supposed to be responsible for the wilting of shoots. No positive evidence excepting specimens of the insects was received. The tarnished plant bug is scarce in southern Indiana according to Dr. B. A. Porter.

IMPORTED CURRENT WORM (Pteronidea ribesi Scop.)

Ohio E. W. Mendenhall (May 24): This insect makes its appearance as usual and does a great deal of injury if not checked, but is easily controlled with arsenate of lead or hellebore.

Indiana H. F. Dietz (May 18): The imported current worm hatched early in the month and noticeable injury by the larvae has been observed at Indianapolis.

Missouri L. Haseman (May 21): Several are reporting the pest from different counties, but at this date most of the worms are practically mature.

Nebraska Don B. Whelan (May 25): The imported current worm was first reported this season from Albion on May 5. Since then it has been reported from Lincoln, Omaha, and several other places in eastern Nebraska.

Kansas

J. W. McCulloch (May 10): Severe injury has occurred at Frederick and Manhattan. At Manhattan gooseberries have been completely defoliated.

CURRENT AND GOOSEBERRY MAGGOT (Epochra canadensis Loew)

Oregon

L. B. Rockwood (May 3): Flies were out and ovipositing at Forest Grove on April 26, two weeks earlier than usual because of the advanced season. This will necessitate early picking for canneries.

PECAN

CAMBIUM CURCULIO (Conotrachelus anaglypticus Say)

Mississippi

R. W. Harned (May 14): On April 23, J. E. Lee, Inspector for the State Plant Board at Poplarville, mailed to us several curculios, possibly Conotrachelus anaglypticus, and pecan twigs that had been damaged by them. He reported that these insects were causing considerable damage to pecan trees in the western part of Pearl River County. On May 11, after visiting the infested area, he wrote: "The infestation seems to be confined to a section of the county next to Pearl River, but it is the most severe case of insect injury that I have seen on pecans. The trees that these twigs were taken from are 30 years old or older and almost every twig is infested. The specimens that I am sending are from the property of J. A. Burge, Route A, Poplarville, who states that he has noticed the beetles for three years. You can find signs on the wood that I am sending where injury was done last year. I want to scout the infestation in the county. I certainly hope that it will be confined to a small section for it will cause great loss if it spreads over the county. The trees that we have found infested so far are adjacent to hundreds of acres of woodland, and the hickory trees in the woods are infested."

May 4, S. A. Renfrow, Route 2, Wesson, Lincoln County, sent in a package of pecan twigs infested with what are probably the same insects. He wrote: "The entire orchard is affected, some trees almost killed. The orchard has been infested for several years."

May 12, O. M. Chance, Inspector for the State Plant Board, went to Lincoln County to investigate this outbreak. He and Mr. Renfrow visited the farms of J. W. Hoggatt and Will Haley. He reported: "We found that this insect is doing a great deal of damage, principally because of the fact that the larva bores the shoots on which the nut clusters form, thereby cutting off the fruit and foliage. On Mr. Hoggatt's farm, we found one tree that had shed a good part of its foliage, and apparently 90 per cent or more of the shoots left were infested. The owner expects this tree to die. Mr. Hoggatt told me that his trees were about ten years old, but he had only noticed this injury during the past three years. He said that it had gotten worse each year and that this season it was much worse than ever. Mr. Hoggatt said that the work of this insect was much more apparent early in the season, and that he did not remember it doing much damage later in the summer. In another grove about 100 yards from the Hoggatt place, three trees were found to be badly infested. In a grove inspected 3 miles away no injury from this insect was found."

On May 14 Mr. Chance found pecans $3\frac{1}{2}$ miles southeast of Brandon in Rankin County, injured by what is apparently the same insect. This infestation is apparently light, as only one larva was found in the twigs collected and sent in by Mr. Chance.

PECAN CASE BEARER (Mincola indiginella nebulella Riley)

Mississippi

R. W. Harned (May 22): Complaints in regard to what is probably the pecan leaf case-bearer have been received from a number of places in the southern portion of the State, as well as from Durant and Winona in the central part of the State. Injury from this insect has in the past not been noticed except in the southern part of the State.

PECAN NUT CASE BEARER (Acrobasis hobbesella Hulst)

Texas

H. S. Adair (April 27): The first feeding of overwintering larvae at Brownwood of the pecan nut case bearer was observed March 23 on the swelling buds of the pecan. Cool weather immediately following this date checked the growth of the pecan trees somewhat and consequently checked the emergence of larvae from hibernation, since the emergence of the larvae coincides with the swelling and opening of the pecan buds. Recently much feeding of the larvae has been observed and the larvae appear much more numerous.

PECAN CIGAR CASE BEARER (Coleophora carvaefoliella Clem.)

Mississippi

R. W. Harned (May 22): Complaints in regard to the pecan cigar case-bearer have been received from the Gulf Coast Counties recently.

PHYLOXERA SPP.

Mississippi

R. W. Harned (May 22): Inspector R. P. Colmer reports that he noticed the first Phylloxera galls on pecan trees this year on May 8 at Moss Point. These galls were identified by Mr. Hamner as Phylloxera notabilis. Specimens of Phylloxera galls collected on hickory at Ackerman have also been received and identified as Phylloxera carvaearia.

AN APHID (Longistigma caryae Harr.)

Mississippi

R. W. Harned (May 14): This insect was reported by a correspondent attacking pecans at Pascagoula on May 10, and was determined by A. L. Hamner.

CITRUS AND SUBTROPICAL

CITRUS APHID (Aphis spiraecola Fatch)

Florida

J. R. Watson (May 15): This insect has been much less abundant

than last year. The damage has been much less than 10 per cent of that of last year's attack. The relative scarcity this year is apparently due mostly to the fact that the steady cold of last winter prevented citrus trees from putting out any new tender growth, with the result that the aphids which can not live on mature foliage were reduced to small numbers. When the growth did come out it came out rapidly and the aphids were not able to thoroughly infest it before it became mature again. The big flush of spring growth, including a heavy setting of fruit, and drought has again put the trees into a very thorough dormancy as far as new growth is concerned and the aphids are very scarce.

Louisiana

T. F. Catchings (April 13): In four groves inspected at the Buras, all new growth was found infested with aphids, and the leaves beginning to curl. Grapefruit, navel oranges, and Louisiana sweet oranges were not infested. Citrus nobilis deliciosa and Citrus nobilis unshiu were being attacked by this insect.

A. W. Cressman (May 4): Aphids are abundant on the above hosts. Most of the new leaves have been curled, and the aphids are attacking the newly set fruit, causing considerable dropping. A few growers have applied nicotine sulphate with good results where leaves were not so tightly curled as to prevent the entrance of the dust.

TRUCK - CROP INSECTS

GENERAL FEEDERS

PAINTED LADY (Vanessa cardui L.)

California

T. D. Urbahn: The larvae are very abundant and causing injury to cultivated crops adjoining vacant lots and uncultivated areas in Gridley, New Castle, and Sacramento.

E. E. Welly (April 17): Larvae plentiful, damage minor. Severe on hollyhocks at Merced.

CUTWORMS (Noctuidae).

Louisiana

Norman Allen (May 8): Cutworms had cut many watermelon plants on one farm. This damage seemed to be in one locality in northern Louisiana. At Shreveport a few cutworms were found cutting pepper plants, and a Dipterous larva was killing cowpea plants that were present at the time.

PEPPER WEEVIL (Anthonomus eugenii Cano)

California

J. C. Elmore (May 3): In a field near Bolsa, Orange County, the first spring generation is emerging. This field has had green plants all winter and is now producing very early pepper pods of the California Chili variety.

POTATO APHID (Illinoia solanifolii Ashm.)

Mississippi R. W. Harned: The potato aphid was reported by a correspondent on English peas at Carpenter on April 30, and was determined by A. L. Hamner.

TORTOISE BEETLES

Mississippi R. W. Harned (May 22): Specimens of tortoise beetles accompanying complaints about their injury have been received from Centerville and Biloxi. From Centerville four different species were received: Chelymorrhha cassidea Fab., Chirida guttata Oliv., Mettriona bivittata Say, and Mettriona bicolor Fab. From Biloxi the report states that as many as 11 beetles were found on a single sweet-potato leaf. The leaves were skeletonized by the beetles. Among the specimens received were 3 Mettriona bicolor Fab., 8 Mettriona bivittata Say, and 58 Chirida guttata.

APHIDAE

South Carolina J. O. Pepper (May 15): Aphids have been worse in gardens this year than they have been in recent years throughout the entire State of South Carolina. All the garden crops, as cabbage, turnips, beans, green peas, and eggplants, have been infested.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

South Carolina J. O. Pepper (May 10): This insect is attacking the potatoes in abundant numbers. However, many of the egg-masses are being destroyed by their ladybird Hippodamia convergens Guer.

Florida J. R. Watson (May 15): The Colorado potato beetle has appeared in destructive numbers in the northern part of Alachua County. This is the first appearance of this insect in destructive numbers so far south in the State, and in an important potato growing section of the State. A single specimen was taken at Gainesville last year. The insect has been in the two northern tiers of Counties of the State for many years.

Louisiana Norman Allen (May 8): Colorado potato beetles are plentiful on potatoes at Gladstone.

Mississippi R. W. Harned (May 22): Complaints in regard to the Colorado potato beetle have been received from several places in Mississippi during the past few weeks, including Grenada, Natchez, Vaiden, and Moss Point. Potatoes and tomatoes have been the host plants.

Texas F. C. Bishopp (May 17): Half grown larvae were observed on garden potatoes at Dallas on this date. They appear not to be very abundant in this vicinity.

POTATO APHID (Illinoia solanifolii Ashm.)

Maryland

P.D.Sanders (May 19): The greatest damage was being done by the feeding upon the blossom buds causing them to drop to the ground. These buds usually produce the early tomatoes to be used for early green tomato shipments. This infestation is the most severe Maryland has had since 1918 and is general throughout Somerset and lower Worcester Counties. 100 per cent plants infested and as high as 34 aphids were found to a single leaf.

BOLL WORM (Heliothis obsoleta Fab.)

Florida

F.S.Chamberlin (May 11): Eggs of this insect are being deposited in abundant numbers upon tomato foliage in Gadsden County.

CARROT BEETLE (Ligyrus gibbosus DeG.)

Texas

F.L.Thomas (May 17): Causing considerable injury to roots of tomato plants in Garza County on May 3.

TOMATO SUCKFLY (Dicyphus minimus Uhler)

Texas

F. L. Thomas (April 22): Abundant and causing severe injury to tomatoes in a garden at Dilley, Frio County.

CABBAGE

CABBAGE APHID (Brevicoryne brassicae L.)

Maryland

P. D. Sanders (May 1): Infested plants stunted, leaves curling, and turning yellow. The 17,000 plants were dusted with a 4 per cent nicotine dust (sulphate source) using 90 per cent air lime and 10 per cent arsenate of lead as a carrier. A 97 per cent kill was effected.

IMPORTED CABBAGE WORM (Pieris rapae L.)

Missouri

L. Haseman (May 21): This pest is unusually scarce this spring in central Missouri, and abundance as compared with an average year seems to be less.

CABBAGE MAGGOT (Hyalemyia brassicae Bouche')

Indiana

J. J. Davis (May 25): The cabbage maggot has been the subject of numerous queries from central and northern Indiana as a pest of cabbage and radish.

STRAWBERRY

SUGARCANE BEETLE (Euthesia rugiceps Lec.)

Mississippi

R. W. Harned (May 14): W. L. Gray, Inspector for the State Plant Board at Natchez, collected on April 29 some rough-headed cornstalk beetles, or sugarcane beetles, on the crowns of

strawberry plants in Adams County. He reported that these insects were damaging the strawberry plants. When he was informed that we had never previously received complaints about these insects attacking strawberries, he went to the farm from which the previous specimens had been collected, and obtained more of the beetles, as well as a number of the plants that were being attacked by the beetles. These insects were boring into the strawberry crowns and roots near the surface of the ground just as they bore into corn and sugarcane.

RED SPIDER (Tetranychus telarius L.)

Maryland E. N. Cory (May 12): Becoming abundant on old beds of strawberry in Montgomery County. Dusting and spraying are general owing to great loss suffered from the same pest last year.

STRAWBERRY ROOT APHID (Aphis forbesi Weed)

Mississippi R. W. Harned (May 5): Reported by a correspondent attacking strawberries at Natchez on May 5, and was determined by A. L. Hamner.

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

Massachusetts A. I. Bourne (May 21): To date the asparagus beetles have not made their appearance at Amherst.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

South Carolina J.O. Pepper (May 14): According to Mr. Eddy, assistant entomologist, field activity of this insect for 1925 started on May 10. It has not been found in the field as yet this season.

Mississippi R. W. Harned (May 19): Under date of May 17, B. W. Jones, county agent of Tishomingo County, Miss., wrote as follows: "While in the Golden community in the south end of Tishomingo County on Friday, May 14, I learned that the Mexican bean beetle had practically destroyed many patches of beans and was damaging several more."

BEAN LEAF BEETLE (Cerotoma trifurcata Foerst.)

South Carolina J.O. Pepper (May 8): This insect is attacking young beans in the garden in abundant numbers in the Piedmont Section. Serious injury is being caused in some places.

Indiana J.J. Davis (May 25): The bean leaf beetle was reported damaging bean foliage at Shoals on May 14.

Mississippi R. W. Harned (May 22): Complaints are being received from all sections of the State in regard to the bean leaf beetle.

PEAS

PEA APHID (Illinoia pisi Kalt.)

Washington R. L. Webster (May 21): W. L. Miller, living at Greenacres just east of Spokane, writes under date of May 19 that "from one to two hundred aphids are found on individual plants."

CANTALOUPE

CARROT BEETLE (Ligyrus gibbosus DeG.)

Texas F. L. Thomas: Reported to be injuring cantaloupes in Bailey County.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Louisiana Norman Allen (May 8): One larva was found in the cantaloupes at Shreveport. At Gladstone, about 9 miles out of Shreveport, larvae had destroyed plantings of cantaloupes, many still present in the hills. At Bossier City, just across the river from Shreveport two rows of beans were found to be nearly dead. Upon examination larvae were found boring the roots and underground stems quite severely. Injured plants were brought in and turned over to Dr. Edgerton, State Plant Pathologist, who states that he could see no disease present. This would seem to indicate that the beetle larvae were responsible for the damage being done.

Mississippi R. W. Harned (May 22): The 12-spotted cucumber beetle, has been reported as damaging melons and cucumbers at a number of places in the State. Reports in regard to injury to corn by the larvae of these beetles have also been received from many localities.

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Mississippi R. W. Harned (May 22): The striped cucumber beetle, has been reported as damaging watermelons, cucumbers, and cantaloupes from all sections of the State. One correspondent reported very serious damage to watermelons at Picayune, Miss., where he found as many as 10 beetles on one plant.

SEED-CORN MAGGOT (Hylemyia cilicrura Rond.)

Louisiana Norman Allen (May 8): At Ruston the seed-corn maggot had practically destroyed plantings of watermelon before the plants got out of the ground. The patch which had been so severely damaged by the seed corn maggot was fertilized with barnyard manure and cottonseed meal, which the grower thought was responsible for the injury. Practically all of the maggots were past the larval stage, and considerable of them had issued as adults, many of which were noted on the ground. (May be another species).

At Shreveport, below fair grounds, the seed-corn maggot was found destroying cantaloupe seed, or this damage had been done previous to the visit.

SQUASH

SQUASH BUG (Anasa tristis DeG.)

Nebraska

Don B. Whelan (May 25): The earliest report for the year, of damage by the squash bug, came from Creighton, Knox County, under date of April 30.

ONIONS

ONION THRIPS (Thrips tabaci L.)

Mississippi

R. W. Harned (May 22): Thrips collected on onions at Pascagoula on May 1 have been identified as the onion thrips.

RHUBARB

RHUBARB CURCULIO (Lixus concavus Say)

Indiana

J. J. Davis (May 25): The rhubarb curculio was reported as severely damaging rhubarb at New Albany on May 19.

RADISH

A SNOUT BEETLE (Pnigodes sp.)

Nebraska

Don B. Whelan (April 25-May 25): A snout beetle Pnigodes sp., has been reported from Gresham, York County, as working on and destroying radishes and turnips.

S O U T H E R N F I E L D - C R O P I N S E C T S

COTTON

BOLL WEEVIL (Anthonomus grandis Boh.)

GENERAL
STATEMENT

B. R. Coad: (Weevil emergence generally at the different co-operating stations has been slower during the last fifteen days of April than was indicated by emergence during the first fifteen days of the month. At the various stations a total of 255 weevils emerged during the latter half of the month compared to 321 during the first half. The total emergence prior to May 1 at the 17 stations was 0.91 per cent while during the same period last year 2.23 per cent of the weevils emerged at the stations then cooperating. The emergence last year prior to May 1 represented 71.8 per cent of the total emergence. At Tallulah, La., during the past 10 years an average of 39.5 per cent of the emergence was completed prior to May 1. The

average emergence to this date was 0.52 per cent.

Weevil emergence has continued to be slow at practically all of the cooperating stations, except Baton Rouge, La., during the past fifteen days. At Baton Rouge, a total of 127 weevils emerged during the first fifteen days of May compared with 58 during the last fifteen days of April. At Clemson College, S. C., and at Aberdeen, N. C., more weevils emerged during the first half of May than during the last half of April, while at all other stations an equal number or fewer weevils emerged during the corresponding period. At 8 of the 16 stations no weevils emerged from May 1 to 15

COTTON FLEA (Psallus seriatus Reut.)

Texas

F. L. Thomas: A survey now being made indicates that injury will be somewhat spotted in the State this year. Cotton is already being attacked, resulting in considerable injury in the lower Rio Grande Valley. No nymphs were found in Ellis County.

GARDEN WEBWORM (Loxostege similalis Guen.)

Texas

F. L. Thomas (May 17): On cotton in Wharton County on May 15.

TOBACCO

CUTWORMS (Noctuidae)

Georgia

F. S. Chamberlin (May 5): Cutworm infestations have been very light this season at Tifton.

TOBACCO WORM (Protoparce sexta Johan.)

Florida

F. S. Chamberlin (May 20): Young hornworms are becoming rather abundant in tobacco fields at this time in Gadsden County. Poison applications are now being made, Paris green and arsenate of lead being the insecticides most commonly employed.

SUGARCANE

LESSER CORN STALK BORER (Elasmopalpus lignosellus Zell.)

Florida

T. E. Holloway (May 21): The Bureau of Plant Industry recently reported that one of their experimental plots of sugarcane at Canal Point was practically ruined by a small larva. This turned out to be the lesser corn stalk borer.

CARROT BEETLE (Eutheola rugiceps Lec.)

Mississippi

R. W. Harned (May 22): Complaints from various points in the State have been received in regard to injury by the rough-headed corn stalk beetle to corn, sorghum, and sugarcane.

FOREST AND SHADE - TREE INSECTS

GENERAL FEEDERS

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

- Illinois J. J. Davis (May 25): Bagworms are prevalent as usual and overwintering cocoons are reported common in some orchards in southern Illinois.
- Missouri L. Haseman (May 21): The pest was very abundant last year but as yet few are reporting the pest this spring. It is still a little early to find the young at work.
- Arkansas W. J. Baerg (May 18): The caterpillars began hatching on May 17. Indications are that in this locality (Payetteville) the infestation will not be very severe.
- Kansas J. W. McColloch (May 15): Large numbers of overwintering bags are to be found on cedars at Carlyle and Netawaka. At Manhattan several bags were found on willows growing along Kansas River. This is a new distribution record.

ASH

ASH SAWFLY (Tomostothus bardus Say)

- Kansas J. W. McColloch (May 17): Larvae were received from Grantville and McPherson with the information that they were causing serious injury to the foliage of ash trees.

BIRCH

BIRCH PSYLLID (Psyllia striata Patch)

- New York E. P. Felt (May 26): Psyllia striata is present in scattering numbers, the young being found usually in partly opened leaves or in clusters which have been webbed together by a small leaf roller.

BIRCH LEAF MINER (Penusa pumila Klug)

- New York E. P. Felt (May 26): The birch leaf miner adults were somewhat prevalent on birches at Karner on May 25. Last year (May 28, 1925) this insect was generally abundant at Karner and it is probable that conditions will be nearly the same on that date this year.

ELM

ELM SAWFLY (Gimbex americana Loach)

- Massachusetts A. I. Bourne (May 21): The elm sawfly is just beginning to make its first appearance. The first adult flies were noted this

morning, May 21, appearing in small numbers on the Camperdown elms on the campus.

ELM SCURFY SCALE (Chionaspis americana John.)

Indiana

J. J. Davis (May 25): This scale appears to be as numerous as a year ago. No hatching has occurred at La Fayette up to date.

Nebraska

Don B. Whelan (April 25-May 25): The white elm scale was sent in from Saline County.

LARCH

WOOLLY LARCH APHID (Chermes strobilobius Kalt.)

NewYork

E. P. Felt (May 26): The woolly larch aphids have just hatched and are rather numerous on larches in Washington Park, Albany.

MAPLE

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

Indiana

J. J. Davis (May 25): The cottony maple scale is as abundant as usual in the northern half of Indiana. Already we are receiving reports of abundant honeydew dropping from infested trees.

H. F. Dietz (May 18): The cottony maple scale in the overwintering stage was found abundant at Rensselaer, Monticello, Winchester, and Nappanee on soft maple and boxelder. Infestations were also found on soft maple in Indianapolis and at Ben Davis.

OAK

OAK LECANIUM (Lecanium quercifex Fitch)

Mississippi

R. W. Harned (May 14): The oak lecanium seems to be fairly abundant in Mississippi at the present time. Recently oak twigs badly infested with this species have been received from correspondents located at Belden, Madden, Verona, and Gulfport.

PINE

PINE LEAF SCALE (Chionaspis pinifoliae Fitch)

Indiana

J. J. Davis (May 25): This scale appears to be as numerous as a year ago. No hatching at La Fayette up to date.

Nebraska

Don B. Whelan (April 25-May 25): The pine leaf scale has been noticed at Arlington, Lincoln, and Laurel. At the latter place about 25 spruce trees were affected, three of which died from this pest.

COTTONWOOD

COTTONWOOD SCALE (Chionaspis ortholobis Comstock)

Nebraska

Don B. Whelan (April 25-May 25): The cottonwood scale was found in Rock County.

WALNUT

WALNUT CATERPILLAR (Datana intergerrima G. & R.)

Indiana

J. J. Davis (May 25): The walnut *Datana* has been the subject of numerous letters from central and northern Indiana calling attention to the seriousness of the pest in 1925.

GREENHOUSE AND ORNAMENTAL PLANTS

MISCELLANEOUS FEEDERS

GREENHOUSE LEAF TYER (Phlyctaenia rubigalis Hbn.)

Indiana

H. F. Dietz (May 18): The greenhouse leaf-tyer has been found impractically every greenhouse in the State during the past five months' inspection. Although no serious damage has been seen or reported to date, nevertheless, unless measures to control this insect are taken, considerable loss may be expected. The plants that have been commonly observed as infested are feverfew, cineraria, calceolaria, chrysanthemum, forget-me-not, snapdragon, and geranium.

LEAF ROLLER (Tortricidae)

Ohio

E. W. Mendenhall (May 4): These insects are a menace to plants in greenhouses and are very hard to eradicate. Paris green or arsenate of lead seems most effective. They seem worse some years than others. They are very bad this year and the greenhouse men are busy fighting them.

A DIGGER BEET (Andrena vicina Smith)

New York

E. P. Felt (May 26): A digger been provisionally identified as Andrena vicina, established itself and seriously injured a rather sandy poor lawn in the vicinity of Albany, there being nearly 400,000 holes per acre, each surrounded by a small mound some half inch high and two or three inches in diameter. Watering liberally with a tobacco soap preparation killed many of the insects.

GREENHOUSE THRIPS (Heliethrips haemorrhodalis Bouche)

Indiana

H. F. Dietz (May 18): The greenhouse thrips has been a very troublesome pest on chrysanthemums throughout the State.

Feverfew and carnations have also suffered from the attacks of this insect.

RED SPIDER (Tetranychus telarius L.)

- Indiana H. F. Dietz (May 18): In a serious greenhouse pest at this time because during the dark weather that we have had since October, 1925, florists were unable to use customary syringing under strong pressure. As a result heavy infestations of this pest are common on roses, carnations, gladioli, and sweet peas.
- Mississippi R. W. Harned (May 22): Red spider injury to rose has been reported from Natchez in Adams County, and from Carrollton in Carroll County a complaint has been received in regard to red spider injury to carnation.

GREENHOUSE WHITEFLY (Trialeurodes vaporariorum Westw.)

- Ohio E. W. Mendenhall (May 4): This is one of the greenhouse pests which have to be fought diligently in southwestern Ohio. It is not new to greenhouse men for it will breed in nearly all hot-houses where its host plants such as Lantana, orange, lemon, and some others are found. Calcium cyanide seems to be effective.

CHRYSANTHEMUMS

CHRYSANTHEMUM GALL MIDGE (Diarthronomyia hypogaea F. Loew)

- Indiana H. F. Dietz (May 18): Light infestations of the chrysanthemum midge have been found during the past two months at Indianapolis, Kokomo, La Fayette, Newcastle, North Manchester, and Richmond. The only heavy infestations of this pest were at Kokomo and Newcastle in greenhouses where no control measures were taken. The method of shearing off the tops of the stock plants to the ground line or slightly below, keeping the plants rather dry until growth starts again, has proved an effective control of midge if all stock plants are thus treated. Better plants than usual have been produced through this method.

ONION THRIPS (Thrips tabaci L.)

- Indiana H. F. Dietz (May 18): Thrips tabaci L. has been a very troublesome pest on chrysanthemums throughout the State. Feverfew and carnation have also suffered from the attacks of this insect.

BLACK CHRYSANTHEMUM APHID (Macrosiphoniella sanborni Gill.)

- Mississippi R. W. Harned (May 20): Reported by a correspondent on chrysanthemum at Laurel on this date, and was determined by A. L. Hamner.

GREEN CHRYSANTHEMUM APHID (Phonalosiphum rufomaculatum Wils.)

- Mississippi R. W. Harned (May 20): Reported by a correspondent on chrysanthemum at Laurel on this date and was determined by A. L. Hamner.

FERN

FERN SCALE (Hemichionaspis aspidistrae Sign.)

Ohio E. W. Mendenhall (May 4): Old plants and "carried over" plants at Springfield become infested with the fern scale and it is a hard one to treat. A soap solution seems to be a safer method to treat the ferns. The calcium cyanide does not seem to be effective and nicotine sulphate seems to burn the plants.

IRIS

IRIS ROOT BORER (Macronoctus onusta Grote)

Indiana H. F. Dietz (May 13): The iris root borer began hatching on May 2, and has been hatching on warm days up to the present time. From our observations and from reports that are being received this insect will probably be more abundant than in 1925.

HOLLY

HOLLY LEAF MINER (Phytomyza ilicis Curtis)

New York E. P. Felt (May 26): Appears to be able to maintain itself upon Long Island, since infested shrubs have been repeatedly observed from 1921 to date. The insect appears to be a very local one.

LILLIES

A NOCTUID (Xanthopastis tinais Cram. (form regnatrrix)

Mississippi R. W. Harned (May 22): R. P. Colmer, Inspector for the Plant Board at Moss Point, reported serious injury to narcissus on May 1 by insects that have been identified by F. H. Benjamin as the larvae of this insect. Later Mr. Colmer sent more of the larvae that were damaging narcissus and also some bulbs of spider lillies taken from the same property that have probably been injured by these insects. Three of the bulbs received had holes in them made by an insect that had burrowed entirely through them, beginning at the surface of the soil and coming out at the bottom.

RHODODENDRON

EUROPEAN HORNET (Vespa crabro L.)

New York E. P. Felt (May 26): A portion of a rhododendron stem some 2 inches in diameter was apparently severely injured by this insect, there being numerous transverse girdlings, extending to the wood, several inches in length and suggesting very strongly crude work with a hand saw. The affected stem was some 2 inches in diameter.

ROSE

ROSE MIDGE (Dasyneura rhodophaga Coq.)

Indiana H. F. Dietz (May 18): With the advent of warm weather rose midge Dasyneura rhodophaga injury has become noticeable in two greenhouses at Newcastle.

POTATO APHID (Illinoia solanifolii Ashm.)

Mississippi R. W. Harned: Reported by a correspondent on rose at Holly Springs on April 23, at Marks on April 22, and at Poplarville on April 24, and was determined by A. L. Hamner.

THRIPS (Thysanoptera)

Mississippi R. W. Harned (May 22): Reports in regard to thrips injuring roses have been received from many points throughout Mississippi.

ROSE LEAF BEETLE (Nodonota puncticollis Say)

Maryland J. A. Hyslop (May 30): Very numerous (10 to a flower) on hybrid tea roses in Montgomery County.

SNOWBALL

SNOWBALL APHID (Anuraphis viburnicola Gill.)

Indiana J. J. Davis (May 25): The snowball aphid was reported early in May as very troublesome in some localities in central Indiana.

SPIRAEA

SPIRAEA APHID (Aphis spireaella Schout.)

South Carolina J. O. Pepper (May 15): The aphids have been more abundant this year than common on spiraea.

APPLE APHID (Aphis pomi DeG.)

Mississippi R. W. Harned (April 23): Reported by a correspondent on spiraea at Tupelo and Utica on April 23, and was determined by A. L. Hamner.

I N S E C T S A T T A C K I N G M A N A N D

D O M E S T I C A N I M A L S

MAN

BEDBUG (Cimex lectularius L.)

New Mexico J. R. Douglass (May 23): Several inquiries have been

received for the control of bedbugs by people living in adobe and log houses in the Estancia Valley since May 1. For the last three seasons complaints have been received in May that the bugs had become active.

CHIGGERS (Trombicula irritans Riley)

Texas

F. C. Bishopp (May 7): The first chiggers observed this season were picked up on May 7. The number increased considerably and considerable annoyance is being experienced by those coming in contact with heavy weed growths at Dallas.

D. C. Farman (May 21): The chigger was first observed in the canyons on May 7 and increased quite rapidly, judging from reports, and at present it is quite annoying to camping parties. It was first observed at Uvalde May 15 and it is rarely observed to date.

FLEAS (Siphonaptera)

Missouri

L. Haseman (May 21): Several complaints have already been received from different parts of the State indicating that the pest seems to be active earlier than usual.

HOUSE FLY (Musca domestica L.)

Texas

F. C. Bishopp (May 24): House flies have increased in numbers at Dallas during the last week so as to be rather troublesome in homes, restaurants, etc.

SHEEP

BLACK BLOWFLY (Phormia regina Meig.)

Texas

F. C. Bishopp (May 3): Some sheepmen in Menard and adjacent counties are experiencing considerable trouble from wool maggots in sheep carrying 12 months' fleece. Some report as high as 20 per cent of ewes which were not tagged early in the season to be infested with wool maggots.

CATTLE

OX WARBLE (Hypoderma lineatum DeVill.)

Nebraska

Don B. Whelan (April 25-May 25): Under date of April 29, specimens of the heel fly were sent in from Emmet, Holt County, where they proved very annoying to cattle this spring.

CANYON HORSEFLY (Tabanus rubescens Bellardi)

Texas

D. C. Farman (May 21): An occasional adult was observed on

cattle in the Nueces anyon on May 7. Two egg masses were found. (May 16): Adults were observed on livestock in the Sabinal canyon, never more than two or three on an animal. One fly was observed ovipositing on a stone in the river and several masses of eggs were found. The egg parasite Prophanurus emersoni Girault was observed ovipositing on a fresh mass of tabanid eggs.

COMMON BOT FLY (Gastrophilus intestinalis DeG.)

Texas F. C. Bishopp (May 2): A number of freshly deposited eggs of this species were observed on horses in this vicinity (Menard), although no adults were actually seen ovipositing. The number of eggs per animal ranges from 100 to 300.

THROAT BOT FLY (Gastrophilus nasalis L.)

Texas F. C. Bishopp (May 2): These bot flies were causing some annoyance to horses in this locality (Menard). Some animals show an infestation of several hundred eggs whereas others have comparatively few.

HORN FLY (Haematobia irritans L.)

Missouri L. Haseman (May 21): This pest is starting out early, as it is already quite abundant. Some dairymen are already asking for fly spray recommendations.

Texas F. C. Bishopp (May 2 and 3): Horn flies are causing range cattle some annoyance in this section (Menard and San Saba). The number present per animal ranges from about 100 to 1,000 with an average of about 400 per animal.

D. C. Parman (May 22): The horn fly is beginning to show up again at Uvalde and as many as 200 adults are observed on some cattle. Most of the cattle have no flies on them. (May 7): Observations were made in the Nueces canyon to 40 miles north; flies were first noticed about 10 miles north of Uvalde and increased north as far as was observed until from 100 to 2,000 flies were on most cattle along the river and in shaded pastures; in the open higher pastures the flies were fewer, never more than 200 to 300 on any cattle.

F. C. Bishopp (May 24): Horn flies are decidedly less numerous on cattle in the vicinity of Dallas than is usual for this time of the year. The number ranges from 100 to 500 with an average of perhaps 200 per animal.

SCREW WORM (Cochliomyia macellaria Fab.)

Texas D. C. Parman (May 21): The adults began to appear in good numbers again about May 14; trapping May 5, 1,496; May 17, 5,820 adults taken. A few cases of worms were found the first of the month and there has been some increases; to date there have never been reported more than 10 cases on any ranch, a good deal less than 1 per cent infestation.

F. C. Bishopp (May 24): At Dallas apparently little trouble has been caused by screw-worm infestations of live stock up to date. Flies are extremely abundant, however, as indicated by tremendous catches made in flytraps about meat packing establishments. The major part of these catches is made up of three species in about the following proportions: C. macellaria, 61 per cent; Phormia regina Meig., 22 per cent; Musca domestica L., 17 per cent.

STABLE FLY (Stomoxys calcitrans L.)

Texas

D. C. Farman (May 21): The flies were not noticeable at Uvalde on May 16, but a few were observed on cattle and horses at Sabinal and they were quite noticeable at Utopia in the Sabinal canyon; there were from 3 to 25 on most cattle and horses or mules.

F. C. Bishopp (May 24): The stable fly has become quite annoying to dairy cattle and horses in this vicinity (Dallas) during the last few days. The abundance appears to be very closely correlated with local breeding places, and herds on farms where there are no suitable breeding grounds are comparatively little troubled.

LONE STAR TICK (Amblyomma americanum L.)

Texas

F. C. Bishopp (May 3): Adults of the lone star tick are fairly abundant in this locality (Menard). They not only annoy people but are present in numbers on stock, especially goats.

POULTRY

PIGEON HIPPOBOSCID (Lynchia maura Bigot)

Florida

F. C. Bishopp: (An infestation of the pigeon hippoboscids was reported from Gardenville.)

STICKTIGHT FLEA (Echidnophaga gallinacea Westw.)

Texas

D. C. Farman (May 21): To date no heavy infestations of fleas have been found but the flea is generally present in flocks of chickens; the heaviest infestation observed was south of Uvalde in the sandy land; about 50 per cent of the chickens examined had fleas and there were from one to about 25 fleas on these.

INSECTS INFESTING HOUSES AND

PREMISES

TERMITES

Indiana

J. J. Davis (May 25): The termite situation in Indiana is unchanged. The problem is not decreasing in importance and if there is any change it is for the worse.

Illinois

August E. Miller (May 19): It can scarcely be said that termites are more troublesome this year than during preceding years. However, many reports from the State are on file indicating the serious

nature of this insect's ravages in all types of wooden construction, and occasionally in dead or dying plants. The severity of this general infestation has reached such proportions as to justify an intensive study of the insect which is now being started, with the hope of developing a more effective control than that now available.

Kansas J. W. McCulloch (May 20): Injury to woodwork in dwellings has been reported from Augusta, Blue Mound, Atchison, and Long Island. At Smith Center white ants are working in the woodwork of the Courthouse.

A report from Marion says the ants are working in the legs of billiard and pool tables in a store building.

At Manhattan, Junction City, and Randolph, injury has occurred to asters and other ornamentals.

Texas F. C. Bishopp (May 24): Many reports have been coming in of house infestation of termites in this vicinity (Dallas). Swarming was reported by two people on this date.

GENERAL T. E. Snyder (May 12): Cryptotermes brevis Walker, a nonsubterranean
STATEMENT termite, has been found injuring a trunk on the third floor of St. Anna's Asylum in New Orleans, La., by Ed. Foster, a collaborator of the Federal Horticultural Board. This termite has been imported into the United States where it has done serious damage to buildings at Key West, Miami and Palm Beach. This is the first record of its occurrence in the United States outside of southern Florida.

C. brevis occurs in the West Indies, Central and South America, and South Africa. It is one of the powder-post termites and is of great economic importance. Probably this termite could survive throughout the southern United States as far north as Washington and San Francisco.

POWDER-POST BEETLES (Lyctus spp.)

Kansas J. W. McCulloch (May 5): A dealer at Coffeyville reports a heavy infestation of powder-post beetles in the wooden handles of his stock of spades and shovels.

DOG FLEA (Ctenocephalus canis Bouché)

Indiana J. J. Davis (May 25): Fleas have also been the subject of numerous inquiries.

Texas F. C. Bishopp (May 24): Many reports of flea infestations under, around, and in houses at Dallas have been coming to the laboratory during the past two weeks. The infestations are associated in every case with cats and dogs which have been kept on the premises within the last few months.

ANTS (Formicidae)

Indiana H. F. Dietz (May 18): Ants have been a very troublesome pest ...

in lawns in Indianapolis this year. The species that we have seen or that has been brought in has been tentatively identified as Formica fusca L., subsp. subsericea Say. This same species along with others, collected in large numbers on the buds of peonies to gather the nectar, which is secreted in large quantities. Numerous calls are received by the State Entomologist's office that the ants are injuring the buds but the most serious damage we have been able to convict the ants of in this respect is as carriers of the peony wilt disease and bud blast. (both caused by the fungus, Botrytis sp.).

A PYRALID MOTH (Aglossa cuprealis Hbn.)

Georgia

T. E. Snyder (May 29): Some lepidopterous larvae were sent in with a report that they were boring in chairs and other furniture at the Jekyll Island Club at Brunswick, Ga. Moths reared from these larvae were determined by Karl Heinrich as the above species, a native of Europe and well established in this country. The larvae feed principally on grains and stored products.

CLOVER MITE (Bryobia praetiosa Koch)

Nebraska

Don B. Whelan (May 25): The clover mite was found at Lexington, Dawson County, where it proved to be obnoxious in a farmhouse by going through cracks in the window sills and in staining up walls and getting on the bed clothes.

